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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,761	12/10/2003	David K. McKnight	CA920030010US1	1980

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International Business Machines  
Intellectual Property Law  
11400 Burnet Road  
Austin, TX 78758

EXAMINER
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MORRISON, JAY A

ART UNIT	PAPER NUMBER
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2168

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/734,761

Applicant(s)

MCKNIGHT ET AL.

Examiner

Jay A. Morrison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/10/03, 5/6/04</u>  | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Claims 1-22 are pending.

#### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The disclosure is objected to because of the following informalities:

- a. Page 1: "Background of the invention" heading missing.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 22 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 22 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The cited claims do not produce a tangible

result. In most cases methods are only statutory when recorded on some computer-readable medium.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellerstein et al. ('Hellerstein' hereinafter) (Patent Number 6,836,894) in view of Chandra et al. ('Chandra' hereinafter) (Patent Number 6,216,132).

As per claim 1, Hellerstein teaches

"presenting to a user for selection at least one filter, each of said at least one filter describing at least one of a type of objects and a type of relationships between objects, each type of objects and each type of relationships between objects being defined by a schema" (column 11, lines 7-24);

"receiving one or more user-selected filters" (column 11, lines 7-24);

"based on said one or more user-selected filters, selecting a set of objects ... each object of said set containing numerical data having a format suitable for a mathematical analysis" (column 11, lines 24-30);

"arranging said mathematical analysis of said numerical data" (column 11, lines 31-41);

"and plotting a result of said mathematical analysis of said numerical data on a graph" (column 11, lines 31-41).

Hellerstein does not explicitly indicate "selecting a root object ... each object of said set being related to said root object either directly, or through a chain of intermediate objects, where each chain of intermediate objects has the same length and all objects at a given level of each chain have a relationship with a parent object which is identical".

However, Chandra discloses "selecting a root object ... each object of said set being related to said root object either directly, or through a chain of intermediate objects, where each chain of intermediate objects has the same length and all objects at a given level of each chain have a relationship with a parent object which is identical" (tree where each level corresponds to attribute, column 5, lines 34-46).

It would have been obvious to one of ordinary skill in the art to combine Hellerstein and Chandra because using the steps of "selecting a root object ... each object of said set being related to said root object either directly, or through a chain of intermediate objects, where each chain of intermediate objects has the same length and all objects at a given level of each chain have a relationship with a parent object which is identical" would have given those skilled in the art the tools to improve the invention by enabling the user to use any filtering criterion expressible with the available

predicates. This gives the user the advantage of being able to choose which data to view and analyze.

As per claim 2, Hellerstein teaches

“obtaining said schema” (structured log descriptor, column 7, line 65 through column 8, line 34);

“and populating said schema” (normalized data matrix, column 8, lines 35-51)

Hellerstein does not explicitly indicate “with said root object and objects related to said root object”.

However, Chandra discloses “with said root object and objects related to said root object” (column 5, lines 34-46).

It would have been obvious to one of ordinary skill in the art to combine Hellerstein and Chandra because using the steps of “with said root object and objects related to said root object” would have given those skilled in the art the tools to improve the invention by enabling the user to use any filtering criterion expressible with the available predicates. This gives the user the advantage of being able to choose which data to view and analyze.

As per claim 3,

Hellerstein does not explicitly indicate “said schema has object descriptors for describing objects and relationship descriptors for describing possible relationships between objects, said schema associating specific relationship descriptors between

specific object descriptors, and at least one of said object descriptors describing a type of numerical data”.

However, Chandra discloses “said schema has object descriptors for describing objects and relationship descriptors for describing possible relationships between objects, said schema associating specific relationship descriptors between specific object descriptors, and at least one of said object descriptors describing a type of numerical data” (column 5, lines 34-46).

It would have been obvious to one of ordinary skill in the art to combine Hellerstein and Chandra because using the steps of “said schema has object descriptors for describing objects and relationship descriptors for describing possible relationships between objects, said schema associating specific relationship descriptors between specific object descriptors, and at least one of said object descriptors describing a type of numerical data” would have given those skilled in the art the tools to improve the invention by enabling the user to use any filtering criterion expressible with the available predicates. This gives the user the advantage of being able to choose which data to view and analyze.

As per claim 4,

Hellerstein does not explicitly indicate “said one or more user-selected filters comprise at least one relationship filter describing a given relationship for selecting objects having said given relationship with a parent object, and at least one object filter describing a given object type for selecting objects having said given object type”.

However, Chandra discloses “said one or more user-selected filters comprise at least one relationship filter describing a given relationship for selecting objects having said given relationship with a parent object, and at least one object filter describing a given object type for selecting objects having said given object type” (filter attributes, column 5, lines 54-63 and column 6, lines 7-17).

It would have been obvious to one of ordinary skill in the art to combine Hellerstein and Chandra because using the steps of “said one or more user-selected filters comprise at least one relationship filter describing a given relationship for selecting objects having said given relationship with a parent object, and at least one object filter describing a given object type for selecting objects having said given object type” would have given those skilled in the art the tools to improve the invention by enabling the user to use any filtering criterion expressible with the available predicates. This gives the user the advantage of being able to choose which data to view and analyze.

As per claim 5,

Hellerstein does not explicitly indicate “said given relationship is one of an attribute relationship and a content relationship”.

However, Chandra discloses “said given relationship is one of an attribute relationship and a content relationship” (column 6, lines 7-17).

It would have been obvious to one of ordinary skill in the art to combine Hellerstein and Chandra because using the steps of “said given relationship is one of an



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attribute relationship and a content relationship” would have given those skilled in the art the tools to improve the invention by enabling the user to use any filtering criterion expressible with the available predicates. This gives the user the advantage of being able to choose which data to view and analyze.

As per claim 6,

Hellerstein does not explicitly indicate “at least one of said relationship descriptors describes a format relationship and said one or more user-selected filters comprise a format filter describing a given format for selecting objects containing numerical data having said given format”.

However, Chandra discloses “at least one of said relationship descriptors describes a format relationship and said one or more user-selected filters comprise a format filter describing a given format for selecting objects containing numerical data having said given format” (column 6, lines 7-17).

It would have been obvious to one of ordinary skill in the art to combine Hellerstein and Chandra because using the steps of “at least one of said relationship descriptors describes a format relationship and said one or more user-selected filters comprise a format filter describing a given format for selecting objects containing numerical data having said given format” would have given those skilled in the art the tools to improve the invention by enabling the user to use any filtering criterion expressible with the available predicates. This gives the user the advantage of being able to choose which data to view and analyze.

As per claim 7,

Hellerstein does not explicitly indicate "said root object is selected based on a user input".

However, Chandra discloses "said root object is selected based on a user input" (consumer registers, column 4, lines 42-54).

It would have been obvious to one of ordinary skill in the art to combine Hellerstein and Chandra because using the steps of "said root object is selected based on a user input" would have given those skilled in the art the tools to improve the invention by enabling the user to use any filtering criterion expressible with the available predicates. This gives the user the advantage of being able to choose which data to view and analyze.

As per claim 8,

"selecting said mathematical analysis based on a user input" (column 11, lines 42-54; column 12, lines 5-15).

As per claim 9,

"said presenting comprises displaying at least one menu having at least one selectable item" (column 11, lines 7-24).

As per claim 10,

"said at least one menu comprises at least one menu providing one or more relationships for selection, and at least one menu providing one or more types of objects for selection" (column 11, lines 7-24).

As per claims 11-20,

These claims are rejected on grounds corresponding to the arguments given above for rejected claims 1-10 and are similarly rejected.

As per claim 21, Hellerstein teaches

"A computer system having a processor and a memory adapted for undertaking the method of claim 1" (column 6, lines 40-62).

As per claim 22,

This claim is rejected on grounds corresponding to the arguments given above for rejected claim 1 and is similarly rejected.

### ***Conclusion***

The prior art made of record, listed on form PTO-892, and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay A. Morrison whose telephone number is (571) 272-7112. The examiner can normally be reached on M-F 8-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on (571) 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jay Morrison  
TC2100

A handwritten signature in black ink, appearing to read 'Tim Vo', is positioned above the printed name and title.

Tim Vo  
TC2100